

DETAILED ACTION

Claim Objections

1. **Claims 2-3, 5 and 31** recite alternative limitations in the form of improper Markush group(s), and therefore said claims are not clear. A proper Markush group recites its members as being "selected from the group consisting of: A, B, and C". See MPEP 2173.05(h). Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 3 and 5-7** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 requires that the non-cationic antimicrobial agent is chosen from a list of "mono- and poly-alkyl and aromatic halophenol" compounds. As the chosen halophenol compound can not be all three things at the same time, instant claim 3 is indefinite. For the purposes of this office action, the examiner has interpreted the claim to read "mono-alkyl aromatic halophenol" or "poly-alkyl aromatic halophenol." Also, claim 3 specifies that the non-cationic antimicrobial agent be chosen from a list of halophenols however, the following compounds listed in the instant claim do not contain halogens: 2-phenyl phenol, 5-methyl-2-pentylphenol, and 4-isopropyl-3-methylphenol. As these

compounds do not contain halogens it is unclear if the non-cationic antimicrobial agent must in fact contain halogens, therefore claim 3 is indefinite.

Claim 5 limits the composition of the invention to containing an 'anionic soap surfactant,' however of the options listed many are simply anionic surfactants (i.e. alkyl sulfates, alkyl phosphates, etc.). It is unclear if the invention specifically requires the inclusion of an anionic *soap* surfactant or if just an anionic surfactant can be used.

Claim 7 contains the trademark/trade names Shellsolv AB, Aromatic 150, Aromatic 200 (naphthalene depleted), Aromatic 200, Aromatic 100, and HAN 857. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe aromatic petroleum distillates (so called hydrocarbon diluents) and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Disch *et al.* (US 4,175,062), in view of Lu *et al.* (US 5,985,819).

Regarding claim 1. Disch *et al.* teaches a hard surface (col 2, ln 60-61) cleaning composition comprising: a) from about 0.05 to about 10 wt% of a non-cationic antimicrobial agent (halogenated phenols, col 7, ln 42-47; see also 2 wt% O-phenylphenol, Ex. 5, ln 34 and col 7, ln 48 and 58); b) from about 1 to about 20 wt% of a water soluble organic solvent (5 wt% ethylene glycol monobutyl ether, Ex. 2); c) from

about 1 to about 20 wt% of an anionic soap surfactant (7.5 wt% sodium dodecylbenzene sulfonate, Ex. 2, In 54; or 1.5 wt% potassium soap of soybean oil fatty acids, Ex. 2, In 56); d) an hydrocarbon diluent (aromatic hydrocarbons, col 7, In 29-30); e) from about 0.001 to about 20 wt% of pine oil (0.8 wt% Ex. 2, In 59); f) optionally, from about 0 to about 10 wt% of optional materials selected from dyes and fragrance/fragrance enhancers (0.003 wt% dyes, Ex. 2, In 61; or 0.4 wt% perfume oils, Ex. 2, In 60); and g) the balance being water (Remainder, Ex. 2, In 62).

While Disch *et al.*, teaches a composition that contains pine oil, the pine oil which has at least 60% terpene alcohols is not explicitly disclosed. However, Lu *et al.* teaches a sanitizing pine oil-type cleaning composition (abstract; col 2, In 51-67) that also contains an organic co-solvent (e.g. glycols and glycol ethers; col 4, In 29 and In 50-53; C₁-C₈ alcohols, col 5, In 12-15), fragrance(s) (col 11, In 30-45), surfactants (col 13, In 45-48) and water (col 13, In 4-6). More specifically, the pine oil preparation contains at least about 60% terpene alcohols (col 3, In 46 to col 4, In 26). Disch *et al.* and Lu *et al.* are combinable because they are concerned with the same field of endeavor, namely disinfectant cleaning compositions containing pine oil. At the time of the invention a person having ordinary skill in the art would have found it obvious to use a pine oil with a 60% or greater terpene alcohol content and would have been motivated to do so in order to obtain the desired extent and degree of blooming as would be desired by a consumer/end user (Lu *et al.* col 3, In 9-11 and 23-26).

Regarding claims 2-6, 8-10, and 12. Modified Disch *et al.* teaches all the claim limitations as set forth above, and further teach a cleaning composition wherein:

- the non-cationic antimicrobial agent is selected from the compounds as listed in instant **claim 2** (halogenated phenols, col 7, ln 42-47; O-phenylphenol, Ex. 5, ln 34 and col 7, ln 48 and 58) ;
- the non-cationic antimicrobial agent is mono- and poly-alkyl and aromatic halophenol selected from the group as listed in instant **claim 3** (col 7, ln 42-47; e.g O-phenylphenol, Ex. 5);
- the water soluble organic solvent is selected from glycol ethers (partial ethers of monohydric alcohols, col 7, ln 22-26; ethylene glycol monobutyl ether, Ex. 2, ln 57);
- the anionic soap surfactant is selected from the compounds as listed in instant **claim 5** (water-soluble salt of fatty acids having 12 to 18 carbon atoms, col 2, ln 37-38, col 3, ln 33-35; potassium soap of soybean oil fatty acids, Ex. 2, ln 56);
- the anionic soap surfactant is selected from alkali metal soap fatty acids (water-soluble salt of fatty acids having 12 to 18 carbon atoms, col 2, ln 37-38, col 3, ln 33-35; potassium soap of soybean oil fatty acids, Ex 2, ln 56);
- the non-cationic antimicrobial agent is present in an amount of from about 0.1 to about 5 wt% (2.0 wt%, O-phenylphenol, Ex. 5, ln 32);
- the water soluble organic solvent is present in an amount of from about 0.5 to about 10 wt% (5.0 wt% ethylene glycol monobutyl ether, Ex. 2, ln 57);

- the anionic soap surfactant is present in an amount of from about 1 to about 20 wt% (1.5 wt% potassium soap of soybean oil fatty acids, Ex 2, In 56);
- and the pine oil is present in an amount of from about 0.1 to about 15 wt% (0.8 wt%, Ex. 2, In 59).

Regarding claim 11. While modified Disch *et al.* teaches a composition that contains a hydrocarbon diluent (aromatic hydrocarbons), not disclosed is the hydrocarbon diluent present in an amount of from about 0.1 to about 10 wt%. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicant's claims patentable in the absence of unexpected results. See *In re Aller*, 105 USPQ 233 and MPEP 2144.05. At the time of the invention a person having ordinary skill in the art would have found it obvious to optimize the amount of hydrocarbon diluent and would have been motivated to do so in order to balance such properties as solvation of the pine oil in an aqueous medium. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. See *In re Boesch and Slaney*, 205 USPQ 215.

Regarding claim 7. While modified Disch *et al.* teaches a composition that contains a hydrocarbon diluent (aromatic hydrocarbons), not disclosed are the specific aromatic hydrocarbon diluents set forth in the Markush group of claim 7. However, as the compounds are known to be aromatic hydrocarbon diluents it would have been obvious to one skilled in the art to select an aromatic hydrocarbon from those listed to use as a diluent with a reasonable expectation of success.

7. **Claims 15-16, 29 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Disch *et al.* (US 4,175,062) in view of Lu *et al.* (US 5,985,819) as applied to claims 1-12 above, and further in view of Goffinet (EP 0 040 882).

Regarding claim 15-16, 29 and 31. Modified Disch teaches all the claim limitations as set forth above, and further teaches the hard surface (col 2, ln 60-61) cleaning composition as set forth above comprising: a) from about 0.1 to about 5 wt% of a non-cationic antimicrobial agent (halogenated phenols, col 7, ln 42-47; see also 2 wt% O-phenylphenol, Ex. 5, ln 34 and col 7, ln 48 and 58); b) from about 0.5 to about 10 wt% of a water soluble organic solvent (5 wt% ethylene glycol monobutyl ether, Ex. 2); c) from about 1 to about 20 wt% of an anionic soap surfactant (7.5 wt% sodium dodecylbenzene sulfonate, Ex. 2, ln 54; or 1.5 wt% potassium soap of soybean oil fatty acids, Ex. 2, ln 56); d) an hydrocarbon diluent (aromatic hydrocarbons, col 7, ln 29-30); e) from about 0.1 to about 15 wt% of pine oil (0.8 wt% Ex. 2, ln 59) which is at least 60% terpene alcohols (Lu *et al.* col 3, ln 46 to col 4, ln 26); and g) the balance being water (Remainder, Ex. 2, ln 62);

Not disclosed by modified Disch *et al.*, is the use of insect repellents in the cleaning composition as set forth above.

Goffinet teaches a similar aqueous (pg 3, ln 28) cleaning composition comprising a surfactant (alkyl benzene sulfonates pg 5, ln 34 to pg 6, ln 4), a polar aromatic solvent (0.5 to 10 wt%, benzyl alcohol, pg 15, ln 9 and 16-17), non-aqueous solvents (ethanol, pg 15, ln 28-31), a germicide (O-phenyl phenate, pg 16, ln 31-33) and optional materials

Art Unit: 4145

(e.g. dyes/perfumes, pg 16, ln 20). Goffinet also includes the use of mixtures of terpenes and terpene alcohols such as linalool, borneol and geraniol (**claims 15, 29 and 31**: pg 14, ln 7-25, e.g. Linalool or α -terpineol) in from about 0.1 to about 5 wt% (**claim 16**: 2.2% Linalool or 1.8% α -terpineol, Ex. 22 or 23 pg 21; also see pg 14, ln 26-37;) of the composition for the purpose of providing excellent cleaning characteristics on soils etc. with little to no filming (etc.) on the surfaces washed (pg 2, ln 28-34).

While Goffinet does not directly teach that the terpenes and terpene alcohols are used as insect repellents, since the terpenes/terpene alcohols disclosed are options within the Markush group of claim 31 it is inherent that the terpenes/terpene alcohols would have this property.

Modified Disch *et al.* and Goffinet are combinable because they are concerned with the same field of endeavor, namely aqueous cleaning compositions with disinfecting properties containing terpene alcohols. At the time of the invention a person having ordinary skill in the art would have found it obvious to add terpenes/terpene alcohols to a cleaning composition and would have been motivated to do so to impart insect repelling on said cleaning composition.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JANE L. STANLEY whose telephone number is

(571)270-3870. The examiner can normally be reached on Monday - Friday, 7:30 am - 5:00pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on (571) 272-1453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JLS

/Basia Ridley/
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